

CLAIMS

1. An optical burst transmission/reception control system comprising:

5 a plurality of slave station apparatuses which commonly use a transmission medium and a transmission band, and

10 a host station apparatus which posts band allocation information for controlling allocation of use transmission bands of said slave station apparatuses to said slave station apparatuses, wherein said respective slave station apparatuses transmit data to said host station apparatus based on the band allocation information posted from said host station apparatus,

15 wherein said host station apparatus has a band allocation control unit which generates the band allocation information including identifications of said slave station apparatuses and types of data to be transmitted by said slave station apparatuses and posting the information to said plurality of slave station apparatuses, and

20 wherein said plurality of slave station apparatuses have a data transmission control unit which identifies as to whether or not the band allocation information is band allocation information about the data types of their slave station apparatuses, and when the band allocation
25 information is the band allocation information about the

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data types of their slave station apparatuses, making control so as to transmit data to said host station apparatus according to the data types represented by the band allocation information.

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2. The optical burst transmission/reception control system according to claim 1, wherein said host station apparatus allows the band allocation information to be included in a management information cell so as to post it
10 to said respective slave station apparatuses.

3. The optical burst transmission/reception control system according to claim 1, wherein the band allocation information is use authorizing information of time slots
15 defined in a transmission direction from said slave station apparatuses to said host station apparatus.

4. The optical burst transmission/reception control system according to claim 1, wherein the data types are types
20 of fixed-speed data which require a real-time property and should be transmitted with constant period and burst data which are generated by transmission request intermittently or temporarily.

25 5. The optical burst transmission/reception control

system according to claim 1,

wherein said host station apparatus further has a band request detection unit which detects intermittent or temporal generation of band request, and

5 wherein said band allocation control unit, as initial setting, allocates a band to fixed-speed data to be transmitted with constant period, and when said band request detection unit detects band request, said a band allocation unit allocates a band to burst data which are newly generated
10 intermittently or temporarily.

6. The optical burst transmission/reception control system according to claim 1, wherein said slave station apparatuses further have a band request unit which, when
15 burst data are generated by transmission request intermittently or temporarily, requests said host station apparatus to allocate a band to the burst data.

7. The optical burst transmission/reception control
20 system according to claim 1,

wherein the band allocation information is information about grouped plural data types,

wherein said band allocation control unit presets information, which represents a band ratio of the grouped
25 plural data types, in the band allocation information, and

wherein said data transmission control unit identifies as to whether or not the band allocation information is band allocation information about grouped data types of their slave station apparatuses, and when the band allocation
5 information is the band allocation information about the grouped data types of the slave station apparatuses, transmits data of the grouped plural types represented by the band allocation information according to the band ratio.

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10 8. The optical burst transmission/reception control system according to claim 1, wherein when the band allocation control unit controls band allocation for a slave station apparatus which does not identify a type of data to be transmitted, said band allocation control unit posts band
15 identification information including identification of the slave station apparatus to the slave station apparatus, and when the band allocation control unit controls band allocation for a slave station apparatus which identify a type of data to be transmitted said band allocation control
20 unit posts band allocation information including the identification of the slave station apparatus and the data type to the slave station apparatus.

9. A host station apparatus used in an optical burst
25 transmission/reception control system that includes

a plurality of slave station apparatuses which commonly use a transmission medium and a transmission band, and

a host station apparatus which posts band allocation
5 information for controlling allocation of use transmission bands of said slave station apparatuses to said slave station apparatuses, wherein said respective slave station apparatuses transmit data to said host station apparatus based on the band allocation information posted from said
10 host station apparatus,

said host station apparatus comprises a band allocation control unit which generates the band allocation information including identifications of said slave station apparatuses and types of data to be transmitted by said slave
15 station apparatuses, and posting the information to said plural slave station apparatuses.

10. A slave station apparatus used in an optical burst transmission/reception control system that includes
20 a plurality of slave station apparatuses which commonly use a transmission medium and a transmission band, and

a host station apparatus which posts band allocation information for controlling allocation of use transmission
25 bands of said slave station apparatuses to said slave station

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apparatuses, wherein said respective slave station apparatuses transmit data to said host station apparatus based on the band allocation information posted from said host station apparatus,

5 said slave station apparatus comprises a data transmission control unit which identifies as to whether or not the band allocation information is band allocation information about a data type of its slave station apparatus, and when the band allocation information is the band allocation information about the data type of the slave station apparatus, making control so as to transmit data to said host station apparatus.

11. An optical burst transmission/reception control method, in which a plurality of slave station apparatuses commonly use a transmission medium and a transmission band, and a host station apparatus posts band allocation information for controlling allocation of use transmission bands of said slave station apparatuses to said slave station apparatuses, and said respective slave station apparatuses transmit data to said host station apparatus based on the band allocation information posted from the host station apparatus, the method comprising:

the initial post step of previously posting the band allocation information including identifications of said

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slave station apparatuses and types of data to be transmitted by said slave station apparatuses from said host apparatus to said plurality of slave station apparatuses;

the holding step of holding the band allocation
5 information posted at the initial post step by means of said slave station apparatuses;

the post step of posting the band allocation information including instruction of bands from said host station apparatus to said slave station apparatuses; and

10 the data transmission control step of identifying as to whether or not the band allocation information posted at the post step is band allocation information about data types of said slave station apparatuses respectively by means of said slave station apparatuses, and when the band
15 allocation information is the band allocation information about the data types of said slave station apparatuses, making control to transmit data to said host station apparatus according to the data types represented by the band allocation information.

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12. The optical burst transmission/reception control method according to claim 11, wherein the band allocation information posted at the initial post step and at the post step is information about a plurality of grouped data types.

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13. The optical burst transmission/reception control method according to claim 11, further comprising:

the detection step of detecting as to whether or not burst data are input into said slave station apparatuses
5 by said slave station apparatuses, and

the band request step of, when the detection step detects the input of the burst data, transmitting band request of the burst data to said host station apparatus,

wherein when said host station apparatus detects the
10 band request, said post step posts the band request including the band allocation information about the burst data to said slave station apparatuses.

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